

the numbers of "discordances" found among the measures of each observer per 1,000 stars, and the number of stars missed on one occasion and noted on the other. The following numbers are obtained from ten plates each; containing about 2,000 stars generally.

Measurer.	Date.	Discordances per 1000.	No. Missed in	
			D.	R.
B.	Early	50	50	94
B.	Recent	54	47	79
F.	Early	100	69	65
F.	Recent	75	55	75
H.	Early	131	66	60
H.	Recent	64	38	39
C.	Early	79	46	48
C.	Recent	43	44	44
M.	Early	82	71	68
M.	Recent	98	110	77
General Mean		... 77.6	59.6	64.9

Occultation of Ceres by the Moon on 1897 November 13, visible at Greenwich.

(Communicated by the Superintendent of the Nautical Almanac.)

The following particulars of an occultation of *Ceres*, as visible at Greenwich, are communicated to the Society in the hope that under favourable conditions of weather it may be possible to observe the emersion of the planet; the Moon being 19 days old and the stellar magnitude of *Ceres* being 7.5.

	G.M.T.			Angle from	
	d	h	m	North	Vertex.
Immersion	13	10	37	56°	99°
Emersion	13	11	30	312	355

Nautical Almanac Office,
1897 Sept. 14.

Catalogue No. 2, of Nebulæ discovered at the Lowe Observatory, Echo Mountain, California. By Lewis Swift.

The following list of 25 new nebulae, follows No. 1 (of 50), discovered at this Observatory and published in *Astronomical Journal* of 1896 November 13, and also in the *Publications of the Astronomical Society of the Pacific*. Since my return to this Observatory in April last, I have devoted my time to searching for comets as well as nebulae, for which this anomalous climate is so well adapted. The following facts will illustrate its truth. The number of clear nights in 1897 May, were 25. Rainfall 0.87 of an inch. In June, 28, rainfall 0.10. Thus far in July, 26,

precipitation 0.15. I have never seen a month when every night was clear, but in 1896 June, every one was clear with a single exception, and that was foggy. One peculiarity of the climate is that there are more clear nights than days, which is the reverse of the conditions at the Warner Observatory, Rochester, New York.

No.	Date. 1895.	R. A. 1900 h m s	Dec. ° ' "	Description.
1	Mar. 23	8 5 38	+ 5 22 45	eeeF, vS, 1E, v close f 12 ^m *, D * nf points nearly to it.
2	^{1897.} May 4	11 47 23	- 3 10 12	eF, pS, R, B * f 55°, np of 2.
3	^{1895.} Mar. 23	11 48 33	- 3 25 15	vF, pS, R, 2 B * in field, 1 n the other np.
4	23	11 48 48	- 4 34 15	eeeF, vS, 1E, a ray, in vacancy, 4 Fst in line S, 1 B and 3 Fstn.
5	^{1897.} May 23	11 49 23	- 2 10 0	vF, vS, R, vFst near nf.
6	23	12 43 2	+ 54 59 45	eeF, S, cE, in field with N.G.C. 4732.
7	23	13 4 27	+ 53 22 48	vF, pL, R.
8	22	13 18 23	+ 6 45 16	eeeF, pS, cE, in vacancy, v dif.
9	June 25	13 47 20	+ 14 46 55	eeeF, pL, R, ee dif, 3 ^d of 4.
10	Apl. 20	13 47 38	- 0 38 0	vL, pF, cE in meridian, in field with 5334, F * close to each end of major axis. See note.
11	June 2	14 46 16	+ 27 59 17	eeF, S, 1E, pB * p, ee dif, another near suspected.
12	2	14 49 37	+ 16 47 5	vF, pS, R, only 1 st near, 10 ^m nf.
13	21	15 14 59	+ 2 8 52	vF, vE, pS, B * in field n partly obscures it.
14	3	15 19 52	+ 13 50 10	eF, pS, vF * close np.
15	21	15 30 0	+ 5 2 0	eF, pS, R, near the first of 6 or 8 st in a curved line.
16	July 22	16 18 45	+ 12 59 16	eeeF, S, 1E, F * near f, 2 Bst in field s nearly point to it, ee dif.
17	6	19 22 0	- 36 24 5	B, eS, vE, stellar, looks like close D * both nebulous. Note.
18	6	19 49 10	- 37 37 13	eeeF, pS, 3 st S, like belt of Orion point to it, ee dif.
19	6	19 53 17	- 38 53 33	eeeF, S, 1E, precedes the below 37°, ee dif, p of 2.
20	6	19 53 55	- 38 53 33	eeF, pS, R, 8 ^m * f 20°, p of 2.
21	8	19 59 0	- 48 42 25	eeeF, pS, R, F * near n, ee dif, p of 2.
22	22	20 2 16	- 45 55 45	vF, pS, R.
23	June 9	20 38 39	- 30 16 30	eF, pS, vE, eeF * and a vF * near sf, point to it sp of 2.
24	9	20 38 45	- 30 6 30	eeF, pS, vE, 8 ^m * 31'n, v dif, nf of 2.
25	July 7	22 35 0	- 38 33 48	vF pS, R.

Notes.

No. 10. This is a remarkable object. I have never seen one just like it. It resembles an elliptical planetary nebula. The light is evenly diffused, and the limb as sharp as a planet. Strange Sir William Herschel missed it, being so near his III. 665. Munich 9619 is 121^s nf.

No. 17. This also is a singular object. I have never seen but one resembling it, and that was on the same night, which I think is N.G.C. 6861. It looks like a close, bright double star, each component having a small, bright, round, star-like nebulous disc. A power of 200 failed to divide it.

The places are for 1900.0, and the year of discovery, except when otherwise noted, is 1897.

N.G.C. 6550, must be struck out, as it is identical with H, III, 555.

*Lowe Observatory. Echo Mountain,
California, 1897 July 26.*

*Catalogue No. 3 of Nebulae Discovered at the Lowe Observatory,
Echo Mountain, California. By Lewis Swift.*

List No. 1 of 50 nebulae discovered here was published in *Astronomical Journal* of 1896 November 13. List No 2 (of 25 nebulae) precedes the present list, and is also published in *Publications of the Astronomical Society of the Pacific*. This, as will be seen, consists of southern nebulae exclusively. It is a field rich in nebulae which that mighty 'Nimrod,' Sir William Herschel, who hunted the sky over, could not reach. Several are quite bright, and a few are interesting. I have examined Gale's ring nebula, R.A. 21^h 53^m 10^s—39° 53' 42" and find it an interesting one, increasing the number now known to seven. It bears considerable resemblance to the one between β and γ *Lyrae*, but is not so bright, nor will it bear magnifying like that celebrated one, though it is too far south for me to do justice to it.

Nos. 1 and 6 are singular specimens, perhaps deserving of a new classification. I have seen three lately, all appearing alike. The third will appear in list four. N. G. C. 1288 is considerably elongated in 0°. It is not round as Sir John Herschel says. Our places agree. N. G. C. 1340 must be struck out. It is identical with 1344, as has been suspected. I examined thoroughly the locality for 1340, and I am certain that it does not exist. Some time I hope to take up this matter of doubtful nebulae.

I am glad I have at length found in Barnard's field a nebula his keen eye failed to see. See No. 24.

